Notice No.1

Rules and Regulations for the Classification of Offshore Units July 2017

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Please note that corrigenda amends to paragraphs, Tables and Figures are not shown in their entirety.

Issue date: October 2017

Amendments to	Effective date	Mandatory Instrument
Part 1, Chapter 3, Section 3	Corrigendum	N/A
Part 3, Chapter 4, Section 1	Corrigendum	N/A
Part 3, Chapter 10, Section 4	Corrigendum	N/A
Part 3, Chapter 20, Section 2	Corrigendum	N/A
Part 4, Chapter 3, Section 4	Corrigendum	N/A
Part 5, Chapter 13, Section 6	Corrigendum	N/A
Part 10, Chapter 2, Section 3	Corrigendum	N/A
Part 10, Chapter 3, Section 6	Corrigendum	N/A
Part 11, Chapter 5, Sections 3 & 7	Corrigenda	N/A
Part 11, Chapter 13, Section 1	Corrigenda	N/A
Part 12, Chapter 20, Section 20	Corrigenda	N/A

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Part 1, Chapter 3
Periodical Survey Regulations

■ *Section 3*
Intermediate Surveys – Hull machinery requirements

3.2 Intermediate Surveys

3.2.3 For all units over five years of age and up to 10 years of age, representative salt-water ballast tanks and other spaces are to be examined as follows:

- **All unit types**

Particular attention is to be given to corrosion control systems in ballast tanks, free-flooding areas and other locations subjected to ~~sea-water~~ sea water from both sides where accessible.

All further instances of sea-water have been amended to read sea water throughout this Rule set.

Part 3, Chapter 4
Accommodation and Support Units

■ *Section 1*
General

1.1 Application

1.1.4 Support vessels which have a diving complex on board are to have the diving installation approved in accordance with LR’s ~~*Rules and Regulations for the Construction and Classification of Submersibles and Underwater Systems*~~ *Rules and Regulations for the Construction and Classification of Submersibles and Diving Systems, July 2017* or an acceptable standard.

Part 3, Chapter 10
Positional Mooring Systems

■ *Section 4*
Design aspects

4.1 Design cases

4.1.3 A load case considering the failure of any one line adjacent to the first failed line should be run to assess the consequence of such a serial failure considering design environmental combinations not less onerous than 10 year return period sea state + 10 year return period wind and associated current at 95 per cent non-exceedance level. The results of the analyses of the positional mooring system with two lines failed should indicate this abnormal configuration does not lead to progressive collapse or incidents of substantial consequences such as loss of life, uncontrolled outflow of hazardous or polluting products, collision, or sinking. For this load case, a factor of safety of one is to be applied to the line minimum breaking load at the ‘end of life’ condition (i.e. excluding corrosion allowance).

Part 3, Chapter 20
Guidelines on Scope of Survey Certification of Safety Critical Equipment

■ *Section 2*
Scope of survey for equipment

2.57 Well control equipment

2.57.1 ~~Independent Review Certificate from a Certifying Authority is to be issued for manufacture and design.~~ Design appraisal for manufacture.

Surveyors will issue a Certificate of Conformity following completion of the equipment and when satisfied that the equipment has been built and tested in accordance with the approved Specification for Manufacture. Manufacturers’ records of materials, inspection and tests should be assessed by the Surveyor.

Part 4, Chapter 3
Structural Design

■ *Section 4*
Structural design loads

4.6 Wind loads

4.6.1 Account is to be taken of the wind forces acting on that part of the unit which is above the still water level in all operating conditions and of the following:

(c) The variation of wind velocity with height and averaging time interval for each applicable condition may be determined from the following expression:

$$V_{HT} = V_R \left(1 + C\,\mathrm{In}\frac{H}{H_R}\right) \bullet \left(1 - 0{,}41 I_U \mathrm{In}\frac{T}{T_0}\right)$$

where

~~$C = 0{,}5731+(0{,}148V_R)^{0{,}5}$~~ $C = 0{,}0573(1+0{,}148V_R)^{0{,}5}$

Part 5, Chapter 13
Bilge and Ballast Piping Systems

- *Section 6*

  Air, overflow and sounding pipes for ~~columnstabilised~~ column-stabilised units

Part 10, Chapter 2
Load and Load Combinations

■ *Section 3*
Dynamic load components

3.6 Accelerations

3.6.2 **Common acceleration parameter.**

(a) The common acceleration parameter, a_0, is to be taken as:

~~$a_0 = (1{,}58 - 0{,}47\mathrm{Cb})\left(\frac{2{,}4}{\sqrt{L}} + \frac{34}{L} + \frac{600}{L_2}\right)$~~

$$a_0 = (1{,}58 - 0{,}47\mathrm{Cb})\left(\frac{2{,}4}{\sqrt{L}} + \frac{34}{L} - \frac{600}{L_2}\right)$$

Part 10, Chapter 3
Scantling Requirements

■ *Section 6*
Evaluation of structure for sloshing and impact loads

6.4 Bottom slamming

6.4.4 **Hull envelope plating.**

(a) The net thickness of the hull envelope plating, t_{net}, is not to be less than:

~~$t_{net} = \frac{0{,}0158\alpha_p s}{C_q}\sqrt{\frac{P_{slm}}{C_a \sigma_{yd}}}$ mm~~

$$t_{net} = \frac{0{,}0158\alpha_{\mathrm{p}} s}{C_{\mathrm{d}}}\sqrt{\frac{P_{\mathrm{slm}}}{C_{\mathrm{a}}\sigma_{\mathrm{yd}}}} \text{ mm}$$

where

~~Cd~~ C_d = plate capacity correction coefficient

~~Ca~~ C_a = permissible bending stress coefficient

Part 11, Chapter 5
Process Pressure Vessels and Liquids, Vapour and Pressure Piping Systems and Offshore Arrangements

■ *Section 3*
Installation

3.1 Installation design requirements

3.1.3 Protection of steelwork and personnel against uncontrolled cryogenic release

(e) Unless the material has been selected accordingly, a water distribution system shall be fitted in way of the hull under the discharge connections to provide a ~~low-pressure~~ low pressure water curtain for additional protection of the hull steel and the side structure. This system is in addition to the requirements of *Pt 11, Ch 11, 1.3 Water-spray system 1.3.1*, and shall be operated when discharging is in progress.

■ *Section 7*
Cryogenic releases

7.3 Protection of steelwork against brittle fracture

7.3.5 Unless the material has been selected accordingly, a water distribution system shall be fitted in way of the hull under the discharge connections to provide a ~~low-pressure~~ low pressure water curtain for additional protection of the hull steel and the side structure. This system is in addition to the requirements of *Pt 11, Ch 11, 1.3 Water-spray system 1.3.1* (d), and shall be operated when discharging is in progress.

Part 11, Chapter 13
Instrumentation and Automation Systems

■ *Section 1*
Instrumentation and Automation Systems

1.4 Pressure monitoring

1.4.2 A high-pressure alarm and, if vacuum protection is required, a ~~low-pressure~~ low pressure alarm shall be provided on the navigating bridge and at the control position required by *Pt 11, Ch 13, 1.1 General 1.1.2*. Alarms shall be activated before the set pressures are reached.

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Part 12, Chapter 20
Recognised Codes and Standards for the Classification of Offshore Units

■ *Section 20*
Hazardous area classification

20.1 Recognised codes and standards for hazardous area classification

20.1.1 The following Codes and Standards are recognised by LR:
IEC 60079 series Explosive atmospheres.
~~IP Code, Part 3 Refining Safety Code.~~
~~IP Code, Part 8 Drilling and Production Safety Code for Offshore Operations.~~
~~IP~~ EI Code, Part 15 Area Classification Code for Petroleum Installations.
ISO 17776 Petroleum and natural gas industries – Offshore production installations – Guidelines on tools and techniques for hazard identification and risk assessment.
NFPA 30 Flammable and Combustible Liquids Code.
ISO 22899-1 Determination of the resistance to jet fires of passive fire protection materials
ISO 20088-1 Cryogenic Spillage

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